

ASOS MAINTENANCE NOTE 22 (for Electronics Technicians)

Engineering Division

W/OSO321:AJW

Frozen wind and direction bottles

GENERAL

This maintenance note provides instructions for ice removal from frozen wind bottles. Ice removal has caused damage to bottle housings, cups, vanes, and bearings. The procedures described below will reduce bottle damage. The use of WD-40 and other oils as a bearing lubricant for wind speed and direction bottles, will cause bearing deterioration. The bearings used in the wind bottles are lubricated with a product which is not compatible with petroleum lubricants and MUST NOT be lubricated by technicians.

PROCEDURE

This section provides the maintenance procedures for removing ice from the wind bottles, cups and vanes. Preventive maintenance consists of inspecting and cleaning (if necessary) the sensor.

As per section 4.5.2.6 Cleaning and Lubrication of ASOS Technical Manual S100, the only cleaning required is to remove any debris from the wind sensor. Because bearings are sealed, there is no requirement for lubrication.

Technicians should remove ice from frozen wind and direction bottles by using the following method.

1. Lower the tower using the procedure in the ASOS Site Technical Manual S100 (page 4-44, Table 4.5.10)
2. DO NOT CHIP the ice off of the wind speed or direction bottles, cups, or vanes.
3. If the ice did not break off when the tower was lowered, remove the wind and direction bottles that have ice on them.
4. Place the removed bottles in a warm place to thaw out. (i.e., your van or car to thaw them out.)

5. After bottles have thawed, dry them thoroughly to prevent later refreezing. Remove cups and vanes and dry inside the shroud.
6. Clean and inspect for damage.
7. Replace wind and direction bottles on tower.
8. Raise the tower using the procedure in the ASOS Site Technical Manual S100 (page 4-45, table 4.5.10)
9. Clear any maintenance flags caused by removing and replacing the wind bottles. Return ASOS to its normal operating condition.

EFFECT ON OTHER INSTRUCTIONS

None.

REPORT MAINTENANCE ACTION

Report corrective action on a Weather Service Form A-26 maintenance record, per instructions in EHB-4, Part 2, Appendix F,

Original Signed

Acting Chief, Engineering Division